

REMARKS

This Amendment is in response to the final Office Action mailed on March 9, 2010. Claim 1 is amended to include features of claim 15 and is further supported, for example, in the substitute specification on page 11, lines 10-15 and in Figures 4 and 5. Claims 14 and 15 are cancelled without prejudice or disclaimer. No new matter is added. Claims 1-10 are pending.

§103 Rejections:

Claims 1-4, 6-9 and 14 are rejected as being unpatentable over Applicants Admitted Prior Art (AAPA) in view of Uchiyama (US Patent No. 6,839,178). This rejection is traversed.

Claim 1 is directed to an imaging apparatus that recites, among other features, a depth of the grooves is larger than a half and 70 % or less of a thickness of the microlens array except for protruding portions of the microlenses.

The combination of AAPA and Uchiyama does not teach or suggest these features. The rejection of claim 15 correctly notes that AAPA in view of Uchiyama does not explicitly disclose that the depth of the grooves is 70 % or less of the thickness of the microlens array. However, based on Figure 2B of Uchiyama, the rejection asserts that it would be obvious to have the depth of the grooves to be 70 % or less of the thickness of the microlens array for a design purpose. This is not the case.

Particularly, a depth of the grooves that is larger than a half and 70 % or less of a thickness of the microlens array except for protruding portions of the microlenses is not possible in the configuration taught by Uchiyama. Uchiyama teaches that a microlens array is produced by discharging drops 108 of lens member compositions 104 into spaces bounded by a light-absorption material 102 (see Figure 1b of Uchiyama). The form of the convex curved surfaces of the lenses is determined by the surface tensions of the lens member compositions 104, etc. (see column 9, lines 3-9 of Uchiyama). Thus, according to the above method, the depth of the grooves (i.e., the height of the light absorption material 102) in the configuration of Uchiyama are then required to be substantially the same as the thickness of the microlens array (i.e., the thickness of the microlens array except for the protruding portions of the microlenses).

Further, if an attempt is made to set the depth of the grooves (i.e., the height of the light absorption material 102) at 70 % or less of the thickness of the microlens array, the lens member compositions 104 would overflow the light-absorption material 102, making it impossible to form the convex curved surface of lenses. This would destroy the intended operability of the transmissive screen of Uchiyama.

Accordingly, it would not be obvious to one skilled in the art to set the depth of the grooves at larger than a half and 70 % or less of the thickness of the microlens array except for the protruding portions of the microlenses based on the teachings of Uchiyama.

For at least these reasons claim 1 is not suggested by the combination of AAPA and Uchiyama and should be allowed. Claims 2-4 and 6-9 depend from claim 1 and should be allowed for at least the same reasons.

Claims 5 and 10 are rejected as being unpatentable over AAPA in view of Uchiyama and further in view of Nishikawa. This rejection is traversed. Claims 5 and 10 depend from claim 1 and should be allowed for at least the same reasons discussed above. Applicants do not concede the correctness of this rejection.

Conclusion:

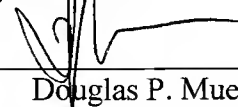
Applicants respectfully assert that the pending claims are in condition for allowance. If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' primary attorney-of record, Douglas P. Mueller (Reg. No. 30,300), at (612) 455-3804.



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